



Air-conditioner Network System

How to Connect the Maintenance Tool via the LAN using PAC-YG50ECA

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When you use the Internet to connect to AG-150A and PAC-YG50ECA, please be sure to use a security device such as a router with a VPN (Virtual Private Network) function to ensure security.

For how to handle PAC-YG50ECA and Maintenance Tool, please refer to the corresponding instruction manuals.

1 Overview

This document summarizes how to connect the Maintenance Tool to a system where the Centralized Controller AG-150A and Expansion Controller PAC-YG50ECA are connected.

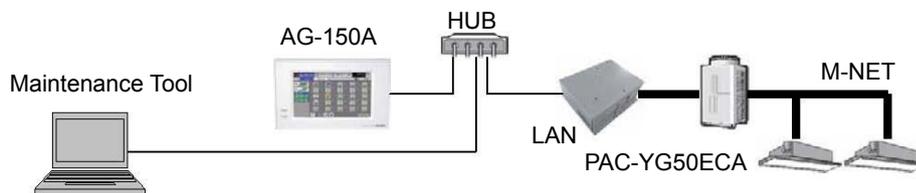
Reference materials

- Maintenance Tools for MN converter & G-50A (AG-150A/GB-50ADA/PAC-YG50ECA)
-Advanced- Operating Manual
- Centralized Controller AG-150A AG-150A-A Instruction Book
- Expansion Controller PAC-YG50ECA Installation Manual/Instructions Book

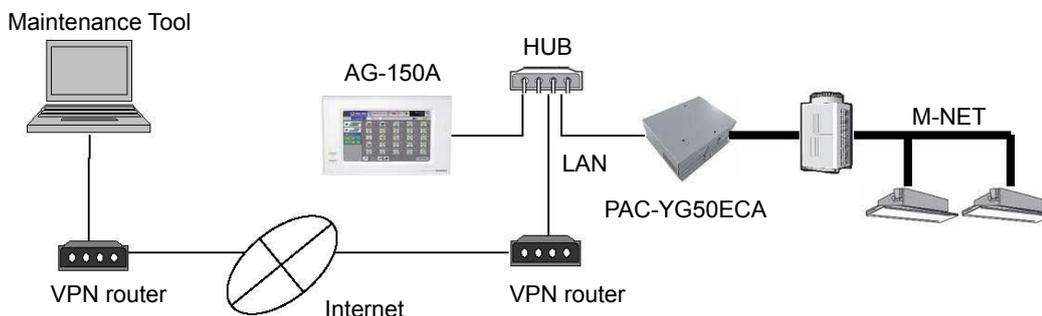
2 How to connect the Maintenance Tool

When you connect the Maintenance Tool to a system using the Expansion Controller PAC-YG50ECA, connect via PAC-YG50ECA (one for each unit) or use the MN Converter (CMS-MING-E). The connection methods 1) to 3) below are described in Chapter 4. For details on the connection method 4), please refer to the manual of the Maintenance Tool.

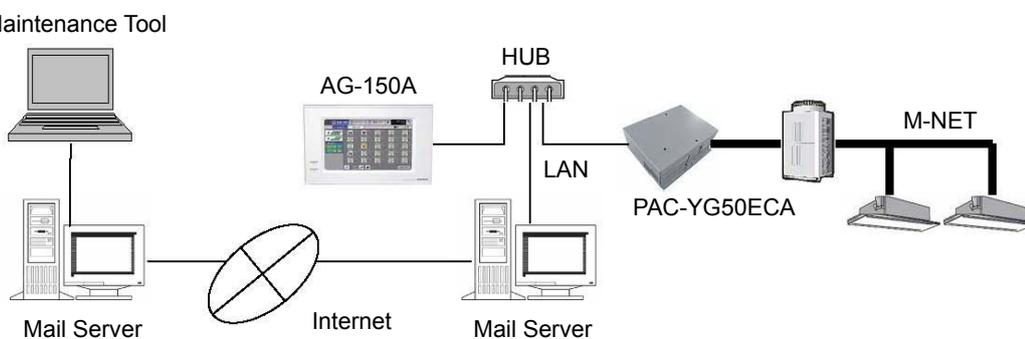
(1) Example of connection via PAC-YG50ECA (LAN connection)



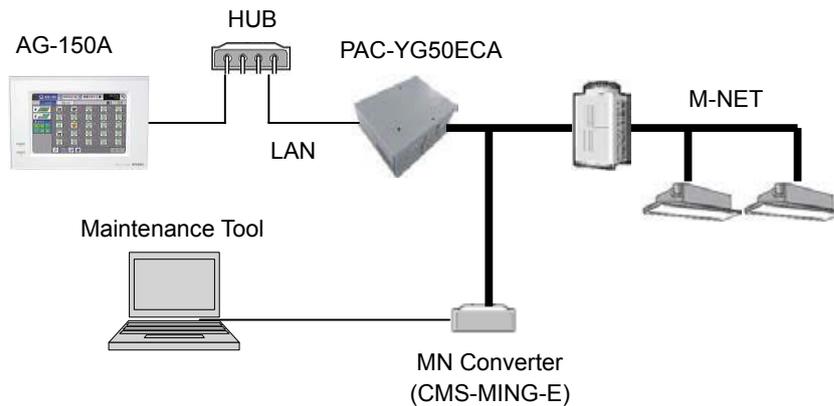
(2) Example of connection via PAC-YG50ECA (Dial-up connection)



(3) Example of connection via PAC-YG50ECA (E-mail connection)



(4) Example of connection via MN Converter



3 Restrictions

License registration for "Maintenance Tool Advanced" is required on AG-150A with PAC-YG50ECA connected. Under the following conditions, the "Web browser for Test Run" function can be used.

(1) System

The PAC-YG50ECA has never been connected to AG-150A via the LAN.

* If AG-150A and PAC-YG50ECA is connected via the LAN, the "Web browser for Test Run" function cannot be used.

(2) Switch settings

SW604-7 is set to OFF.

* SW604-7 is a switch for error display on the local remote controller when an ECLine communication error occurs. If the switch is set to ON, the "Web browser for Test Run" function cannot be used.

(3) Usage periods

Within approx. 30 days after PAC-YG50ECA unit is first powered up.

* After the period is expired, the "Web browser for Test Run" function can be used for 24 hours by switching SW604-5 from OFF to ON while the power is on.

4 How to connect via PAC-YG50ECA

- When you use the Maintenance Tool via PAC-YG50ECA, initial settings for AG-150A and PAC-YG50ECA are required.
- Please make sure that the program versions of AG-150A and PAC-YG50ECA are the following. For any version other than these, a program update will be required.
 - AG-150A: Ver.2.45 or above
 - PAC-YG50ECA: Ver.1.45 or above
- Please make sure that the version of the Maintenance Tool is Ver.4.44 or above.
- For registration of "Maintenance Tool Advanced," register from AG-150A connected to PAC-YG50ECA. The Maintenance Tool can be used for PAC-YG50ECA managed by AG-150A for which license registration has been completed.
- For how to set PAC-YG50ECA, AG-150A and the Maintenance Tool, please refer to the following chapters:
 - 4.1 Initial setting and connection method for PAC-YG50ECA
 - 4.2 Initial setting and connection method for AG-150A
 - 4.3 Setting for the Maintenance Tool

4.1 Initial setting and connection method for PAC-YG50ECA

4.1.1 LAN or Dial-up connection

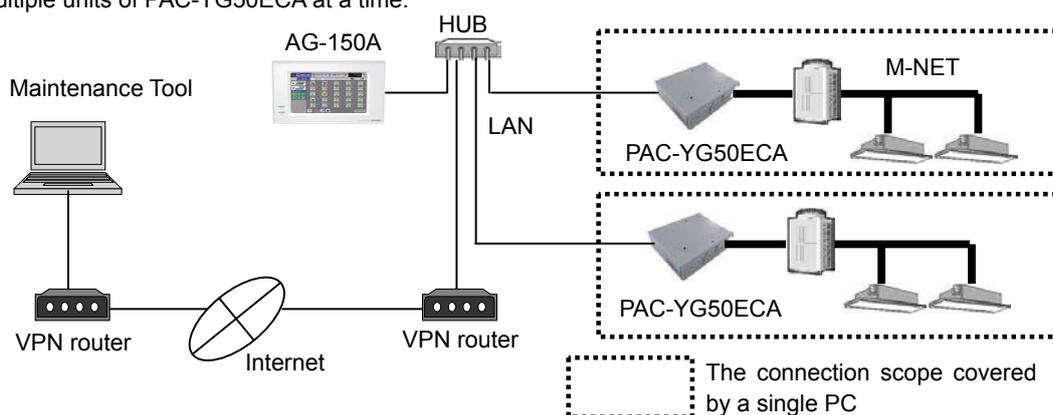
- When you connect the Maintenance Tool to AG-150A and PAC-YG50ECA that reside in a different network, settings such as a gateway address are required for the PC and PAC-YG50ECA.

Setting items

	Network connection	
	Within the same network	Over different networks
PC	—	<ul style="list-style-type: none"> • PC address • Gateway address
PAC-YG50ECA(EC)	—	<ul style="list-style-type: none"> • Gateway address^{*1}

*1 No resetting is required when the gateway address is already set.

- A single Maintenance Tool PC can connect to a single unit of PAC-YG50ECA, but cannot connect to multiple units of PAC-YG50ECA at a time.

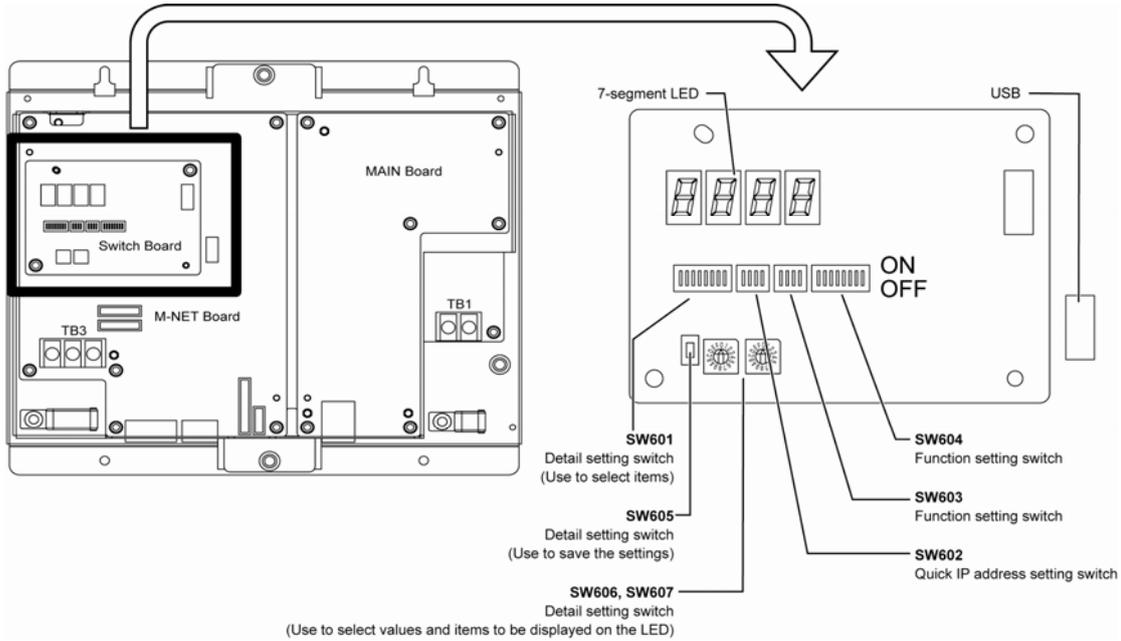


(1) Setting the gateway address for PAC-YG50ECA

The gateway address (a.b.c.d) can be set using the detail setting switch on the PAC-YG50ECA unit or from the Web browser for Initial Settings screen of PAC-YG50ECA.

a) When using the detail setting switch for the setting:

Layout chart of the switch



Setting items

No	Setting item	SW601 [0: OFF 1: ON]								Description	Remark
		1	2	3	4	5	6	7	8		
	gateway										
24	a	0	0	0	1	1	0	0	0	Gateway address a.b.c.d (Factory default setting: 0.0.0.0)	All of them must be set to OFF for SW602.
25	b	0	0	0	1	1	0	0	1		
26	c	0	0	0	1	1	0	1	0		
27	d	0	0	0	1	1	0	1	1		

The example of the operation procedure described below assumes that [Gateway address d] is set to "250 (FA in hexadecimal notation)."

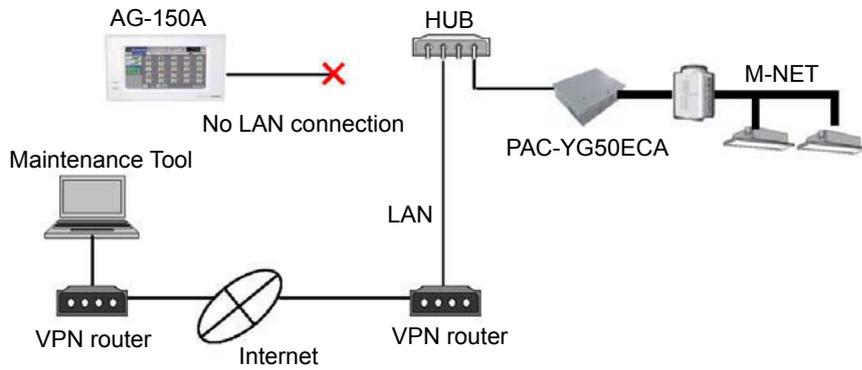
The LED displays numeric values in decimal notation.

- (1) Set SW601 to [0001 1011].
7-segment LED --- [_027] will appear for one second, and the SW606 and SW607 preset values will appear.
- (2) Set SW606 (upper digit) to F, and SW607 (lower digit) to A. (Enter values in hexadecimal notation.)
7-segment LED --- [250] will appear.
- (3) Press SW605 for three seconds.
7-segment LED --- [250] will blink, and [End] will appear.
* If [Err _] is displayed, repeat the above steps from (1).

- b) When setting from the Web browser for Initial Settings screen
The gateway address for PAC-YG50ECA can be set from the Web browser for Initial Settings screen of PAC-YG50ECA.
- * You cannot log in to PAC-YG50ECA when being connected to AG-150A. You need to disconnect AG-150A from the system for the setting. **When operations are already underway, please be sure to first obtain your customer's consent to the fact that disconnecting AG-150A will cause communication error.**
 - * Within approx. 30 days after PAC-YG50ECA unit is first powered up.
After the period is expired, the "Web browser for Test Run" function can be used for 24 hours by switching SW604-5 from OFF to ON while the power is on.

i) Preparation

Connect only the Maintenance Tool PC and PAC-YG50ECA via the HUB.

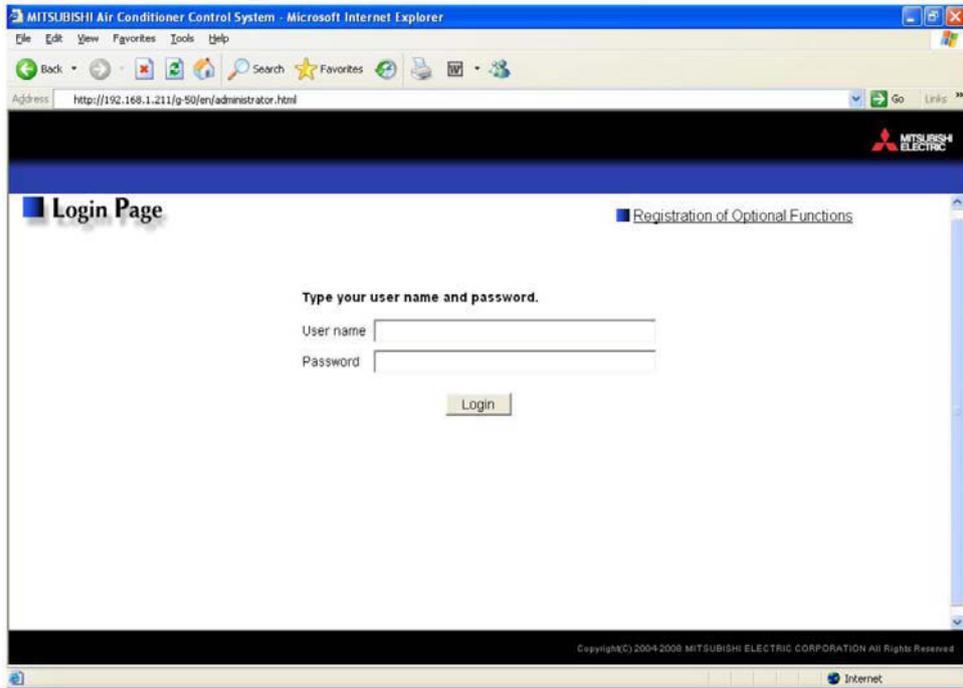


ii) Logging in to PAC-YG50ECA

When entering the following web page address in the address field of the Web browser, and pressing [Enter] (Return) key on the keyboard, the Login screen will appear. Enter a user name and password and then click [Login] button.

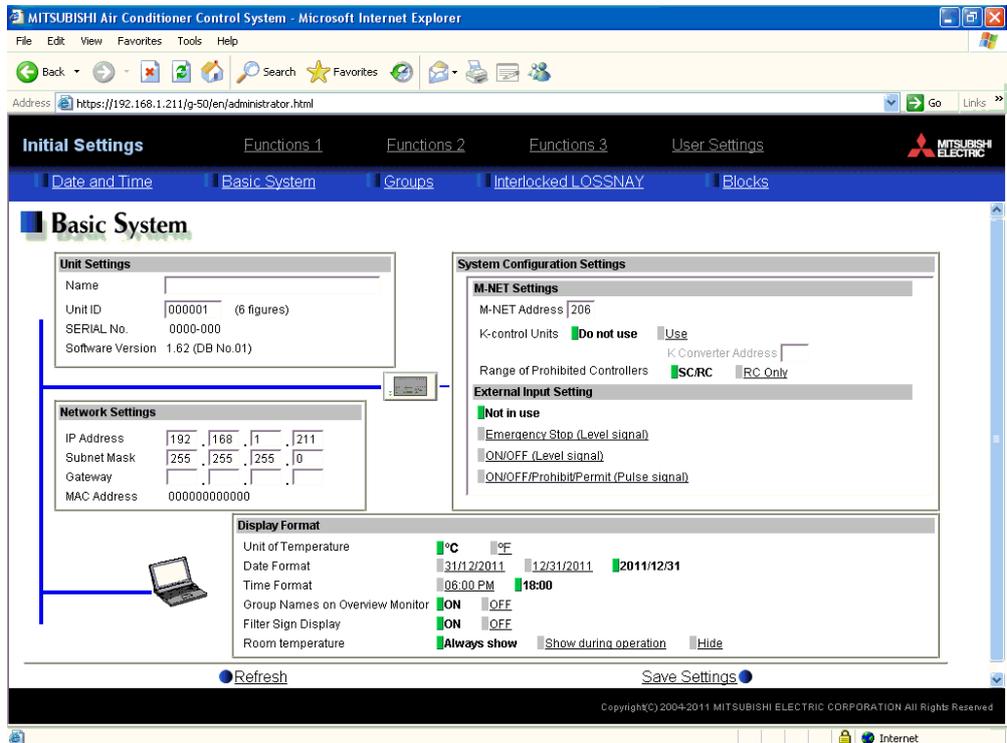
URL: `http://[IP address of PAC-YG50ECA]/g-50/administrator.html`

* For example, when the IP address of PAC-YG50ECA is [192.168.1.211], the web page address is `http://192.168.1.211/g-50/administrator.html`.



iii) Opening the setting screen

Click [Initial Settings] - [Basic System] to open the Basic System screen.



iv) Setting the network information for PAC-YG50ECA

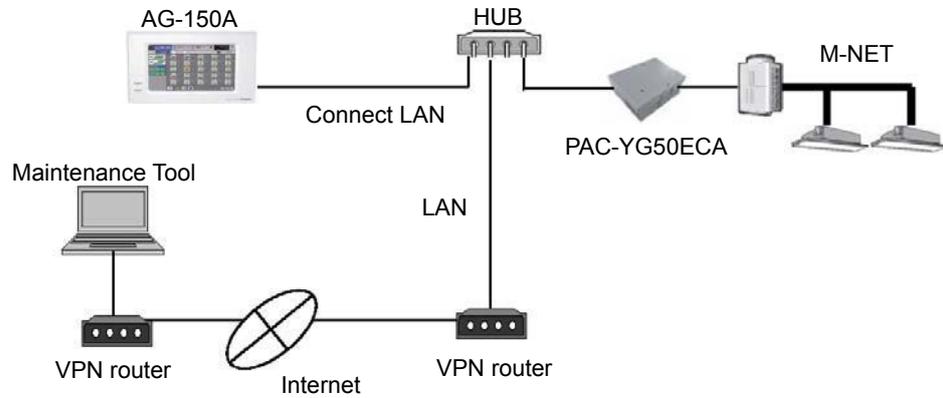
Enter the gateway address in the Gateway field and click [Save Settings].

Network Settings				
IP Address	192	168	1	211
Subnet Mask	255	255	255	0
Gateway				
MAC Address	000000000000			

v) Restoring the original system

Connect AG-150A to restore the system to the original state.

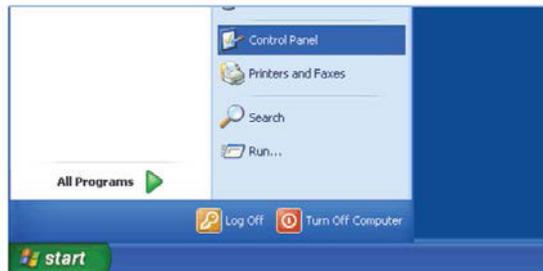
* When multiple units of PAC-YG50ECA are connected, repeat the same setting steps 1) to 4) for each.



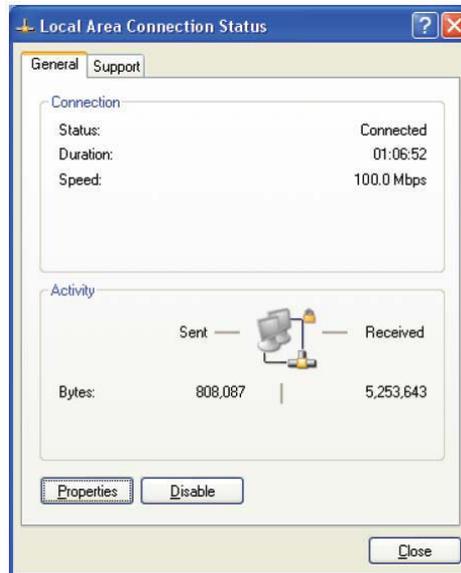
(b) Setting the PC's gateway address

How to set the PC's gateway address is shown below using Windows XP as an example.

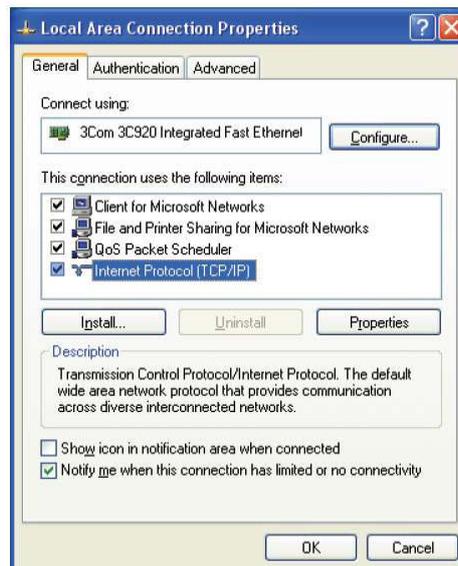
- i) Select [start] - [Control Panel] to open the Control Panel.



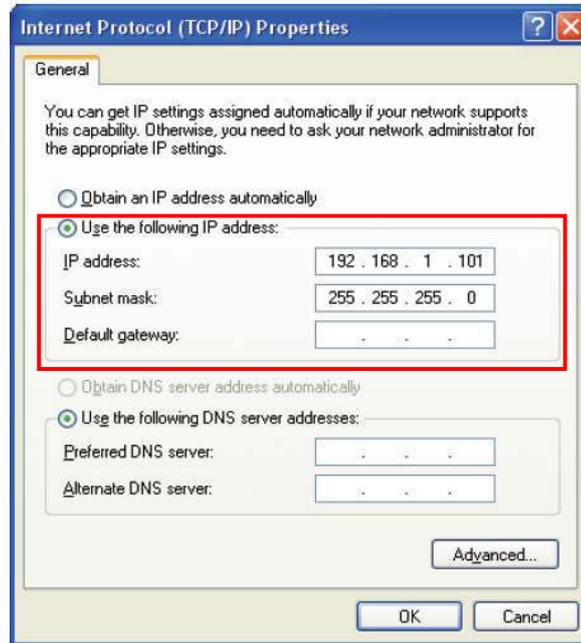
- ii) On the Control Panel screen, when double-clicking [Network and Dial-up Connections], the Network Connections screen will appear. Double-click [Local Area Connection] to open [Local Area Connection Status] screen, and then click [Properties].



- iii) On [Local Area Connection Properties] screen, click [Internet Protocol(TCP/IP)] to select and click [Properties] button.



- iv) On the IP address setting screen, click [Use the following IP address] to select, and then enter data in the IP address, Subnet mask and Default gateway fields.
- * Please use addresses that are not duplicated on other devices.
 - * The following is an example of data entry:



- * For Windows Vista and Windows 7, set the gateway addresses by referring to the above procedure.
For more detailed procedure, please see your OS's help program.

4.1.2 E-Mail connection

From the Web browser for Initial Settings screen of PAC-YG50ECA, set data such as the gateway address, e-mail address and e-mail server for PAC-YG50ECA, and the e-mail address for the Maintenance Tool.

- * You cannot log in to PAC-YG50ECA when being connected to AG-150A. You need to disconnect AG-150A from the system for the setting.
- * Within approx. 30 days after PAC-YG50ECA unit is first powered up. After the period is expired, the "Web browser for Test Run" function can be used for 24 hours by switching SW604-5 from OFF to ON while the power is on.

(1) Setting the gateway address for PAC-YG50ECA

For how to set the gateway address for PAC-YG50ECA, please refer to 4.1.1 LAN or Dial-up connection.

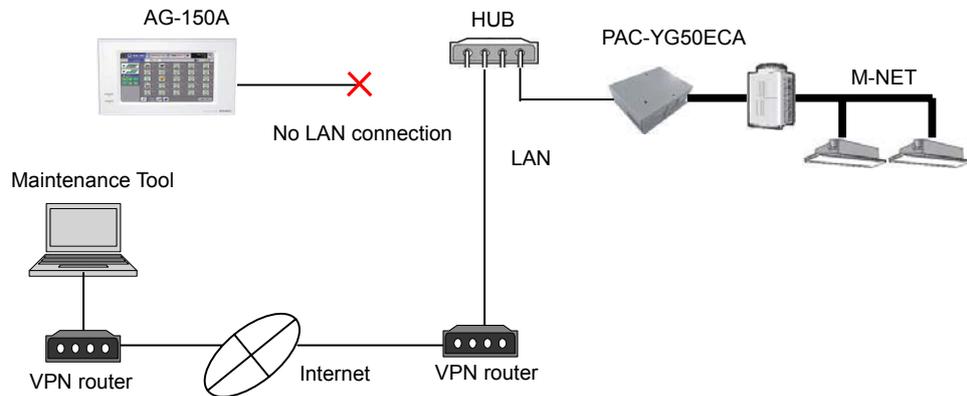
(2) Setting the PC's gateway address

For how to set the PC's gateway address, please refer to 4.1.1 LAN or Dial-up connection.

(3) Setting the e-mail and e-mail server information for PAC-YG50ECA

i) Preparation

Connect only the PC and PAC-YG50ECA via the HUB.

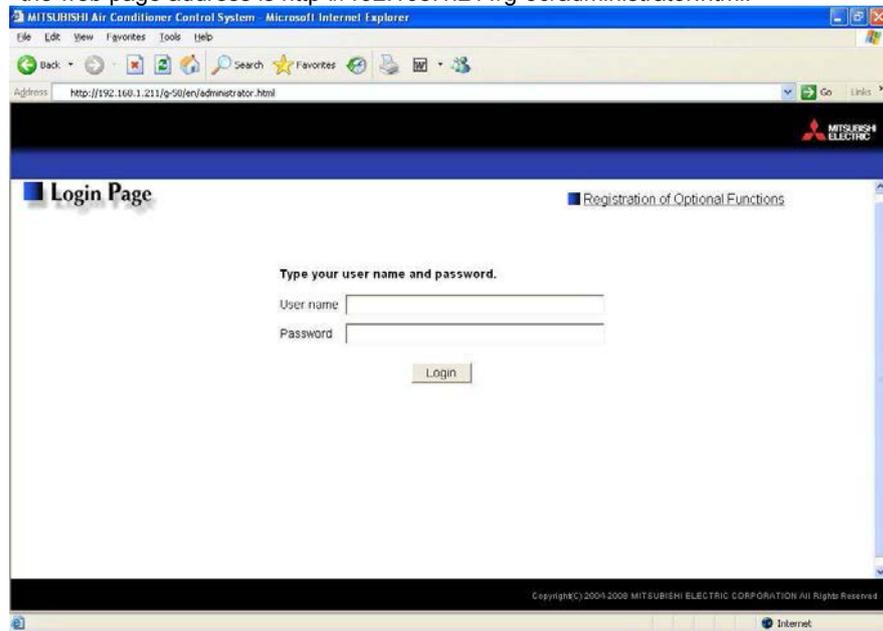


ii) Logging in to PAC-YG50ECA

When entering the following web page address in the address field of Web browser, and pressing [Enter] (Return) key on the keyboard, the Login screen will appear. Enter a user name and password and then click [Login] button.

URL: http ://[IP address of PAC-YG50ECA]/g-50/administrator.html

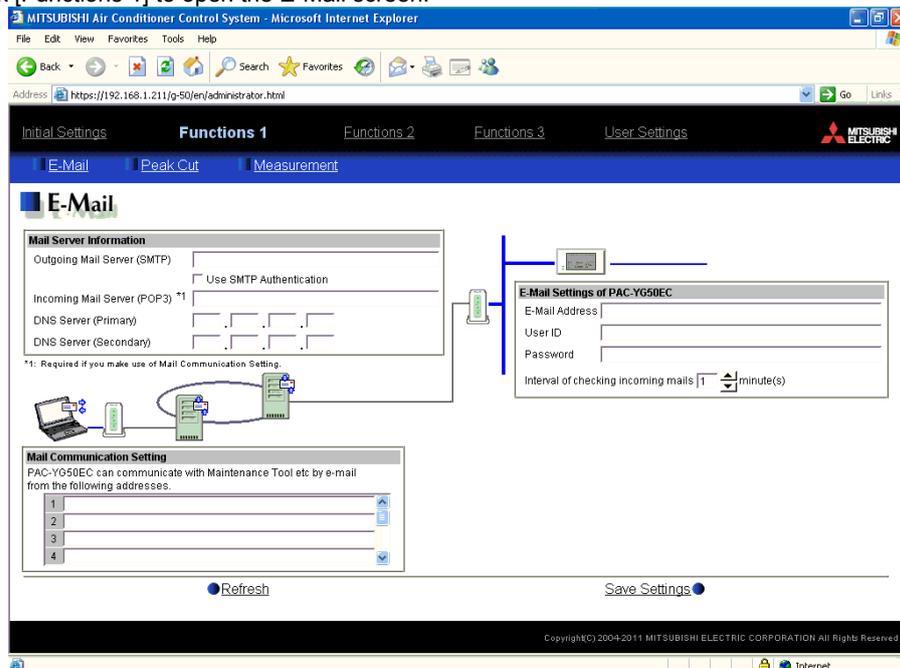
* For example, when the IP address of PAC-YG50ECA is [192.168.1.211], the web page address is http ://192.168.1.211/g-50/administrator.html.



iii) Opening the setting screen

For how to set the gateway address, please refer to 4.1.1 LAN or Dial-up connection.

Click [Functions 1] to open the E-Mail screen.



iv) Setting the e-mail information for PAC-YG50ECA

Enter the e-mail information provided by your Internet service provider or LAN administrator.

- * To transmit e-mail via an Internet service provider, you need to make a contract with the Internet service provider.

The following is an example of data entry:

E-Mail Settings of PAC-YG50ECA	
E-Mail Address	mitsubishi@50ec.co.jp
User ID	50ec
Password	*****
Interval of checking incoming mails	1 <input type="button" value="▲"/> <input type="button" value="▼"/> minute(s)

v) Setting the e-mail server information

Enter the e-mail server information provided by your Internet service provider or LAN administrator.

You can enter either the IP address or host name (server name) in the mail server portions.

The following is an example of data entry:

Mail Server Information	
Outgoing Mail Server (SMTP)	smtp.50ec.co.jp
	<input checked="" type="checkbox"/> Use SMTP Authentication
Incoming Mail Server (POP3) *1	pop.50ec.co.jp
DNS Server (Primary)	12 . 34 . 56 . 78
DNS Server (Secondary)	12 . 34 . 56 . 78

vi) E-mail communication setting

Set the e-mail address of the Maintenance Tool, and click [Save Settings].

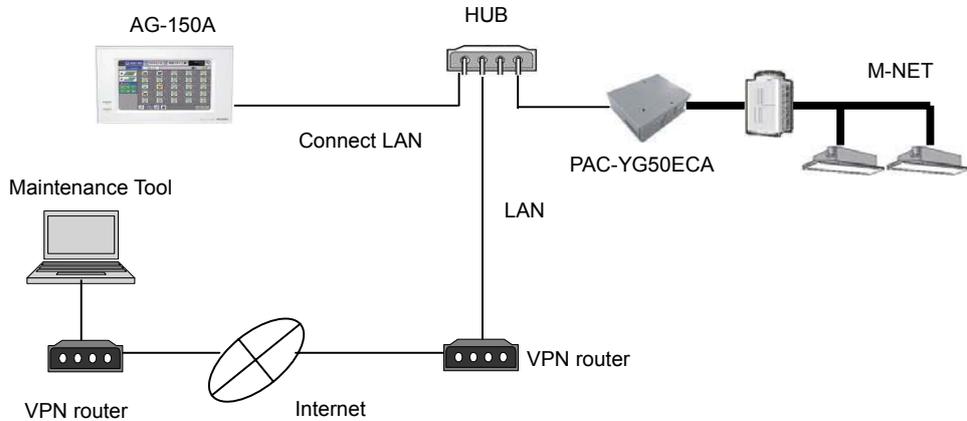
The following is an example of data entry:

Mail Communication Setting	
PAC-YG50ECA can communicate with Maintenance Tool etc by e-mail from the following addresses.	
1	maite@50ec.co.jp
2	
3	
4	

vii) Restoring the original system

Connect AG-150A to restore the system to the original state.

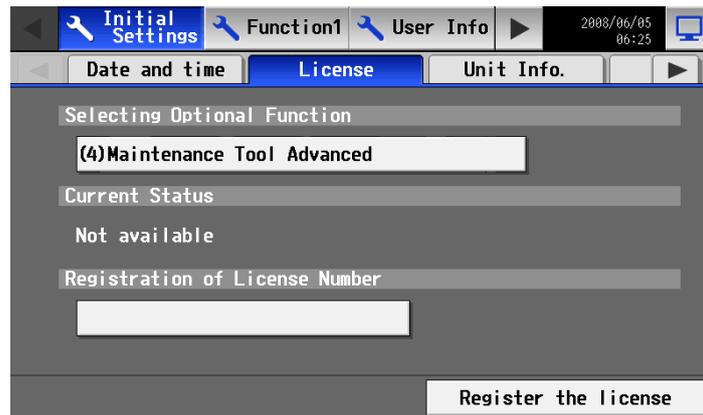
- * When multiple units of PAC-YG50ECA are connected, repeat the same setting steps 1) to 6) for each.



4.2 Initial setting and connection method for AG-150A

From the LCD screen or web screen of AG-150A, complete license registration for “Maintenance Tool Advanced” on AG-150A.

For how to perform license registration, please refer to the AG-150A Instruction Manual.



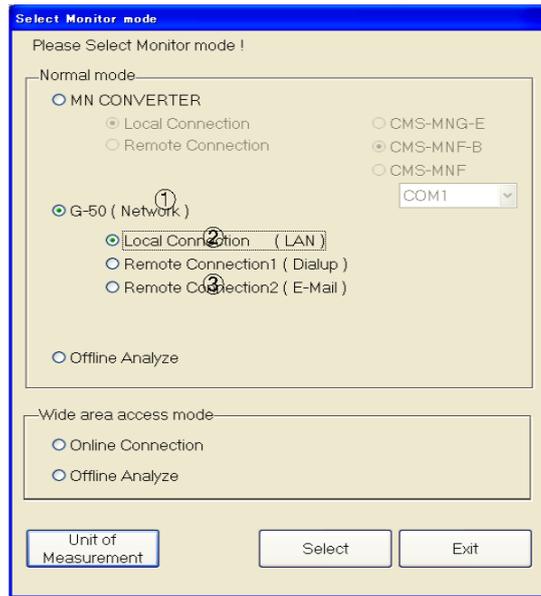
4.3 Setting for the Maintenance Tool

To use the Maintenance Tool, AG-150A and PAC-YG50ECA must be correctly connected. When any communication error is occurring between AG-150A and PAC-YG50ECA, the Maintenance Tool cannot be used.

Note

- This chapter shows the setting procedure for the Maintenance Tool Ver.4.44.
For the Maintenance Tool Ver.5 or above, substitute different steps as needed while working.

Upon the startup of the Maintenance Tool, the following screen will appear.

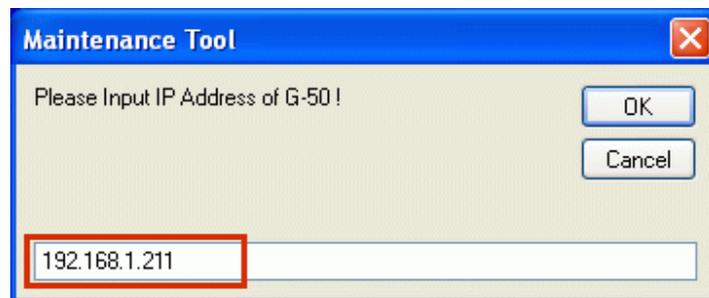


4.3.1 LAN connection

Tick ①[G-50(Network)] and ②[Local Connection (LAN)], and click [Select] button.

Enter the IP address of PAC-YG50ECA in the destination IP address entry field, and click [OK] button to start connection.

The following is an example of data entry:



4.3.2 E-Mail connection

Tick ①[G-50(Network)] and ③[Remote Connection2 (E-Mail)], and click [Select] button.

Click  button to open the E-Mail address setting screen.

The following is an example of data entry:



Remote Connection (E-Mail)

G-50

Customer Name MITSUBISHI ELECTRIC

Name EC

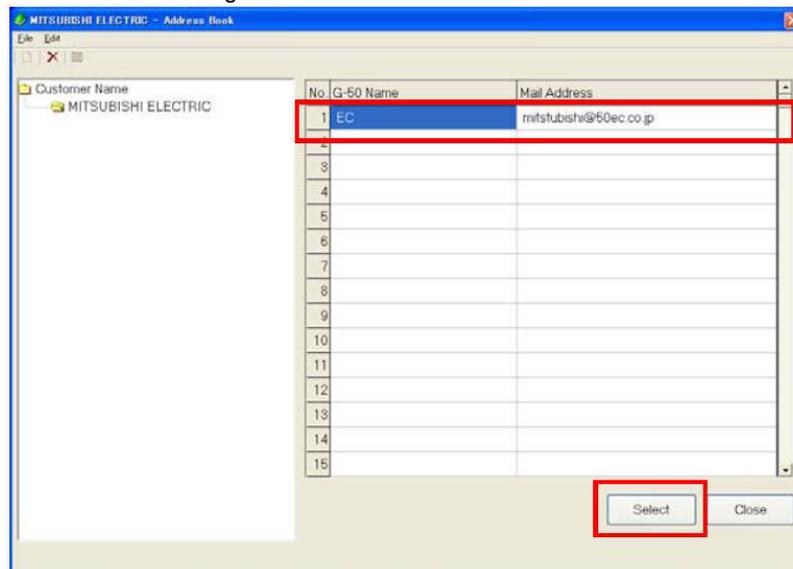
Mail Address mitsubishi@50ec.co.jp

Open Advanced Connect Cancel

(1) When using for the first time

From the E-Mail address setting screen, enter the e-mail address of PAC-YG50ECA in the destination e-mail address entry field, and click [Select] button.

E-Mail address setting screen



MITSUBISHI ELECTRIC - Address Book

File Edit

Customer Name

MITSUBISHI ELECTRIC

No.	G-50 Name	Mail Address
1	EC	mitsubishi@50ec.co.jp
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Select Close

Click [Open Advanced] button to open the detail setting screen, and enter the e-mail and e-mail server information for the Maintenance Tool. Then, click [Connect] button to start connection.

The screenshot shows a dialog box titled "Remote Connection (E-Mail)". It contains the following fields:

- Customer Name: MITSUBISHI ELECTRIC
- Name: EC
- Mail Address: mitsubishi@50ec.co.jp

At the bottom, there are three buttons: "Open Advanced" (highlighted with a red box), "Connect", and "Cancel".

Detail setting screen

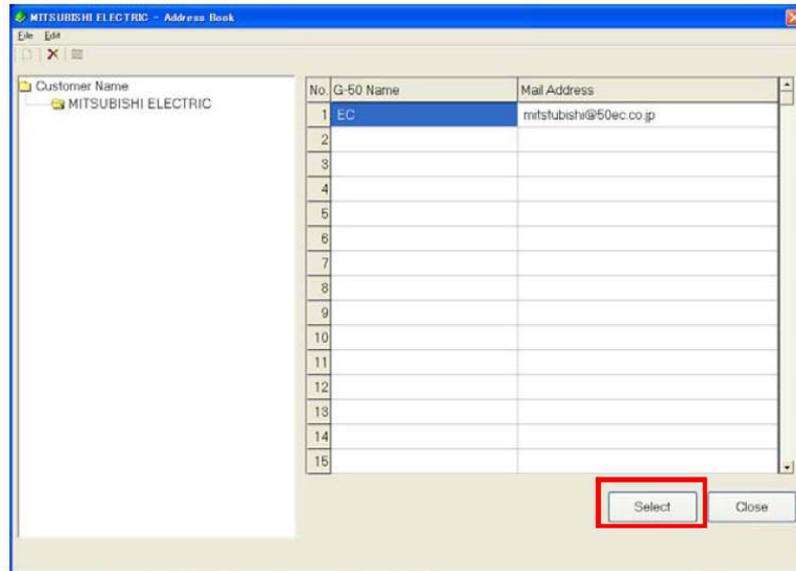
The screenshot shows the advanced settings for the "Remote Connection (E-Mail)" dialog box. It includes the same fields as the previous screen, plus additional settings for the Maintenance Tool:

- Maintenance Tool**
 - POP Server**
 - POP Server Address: pop.50ec.co.jp
 - POP Account: 50ec
 - POP Password: *****
 - POP Receive Interval: 5 Sec.
 - SMTP Server**
 - SMTP Server Address: smtp.50ec.co.jp
 - SMTP authentication
 - User name: [empty]
 - Password: [empty]
 - Mail Address**
 - Self Mail Address: mitsubishi@50maintetool.co.jp

At the bottom, there are three buttons: "Close Advanced", "Connect" (highlighted with a red box), and "Cancel".

- (2) When using for the second time or more
From the E-Mail address setting screen, select the e-mail address you want to use and click [Select] button. Then, click [Connect] button to start connection.

E-Mail address setting screen



For the steps after this, please refer to the Maintenance Tools for MN converter & G-50A (AG-150A/GB-50ADA/PAC-YG50ECA) -Advanced- Operating Manual.



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